## **AMENDMENTS TO THE SPECIFICATION**

Please amend Table 5 on page 64 as follows:

**TABLE 5: PCR Primers** 

SNP Reference	Forward PCR primer	SEQ ID NO.	Reverse PCR primer	SEQ ID NO.
rs1374297	ATACCTGTGGCGTACACATG	4	AAAAGGTAGGCCTCACTTGC	<u>5</u>

Please amend Table 6 on page 64 as follows:

**TABLE 6: Extension Primers** 

SNP	Extend Probe	SEQ	Termination
Reference		ID NO.	Mix
rs1374297	CTGTGGCGTACACATGAAACTG	<u>6</u>	ACT

Please amend Table 10 on pages 67-69 as follows:

TABLE 10

dbSNP	Forward	Reverse
rs#	PCR primer	Reverse PCR primer
	ACGTTGGATGACAAACGGGGAAAACTC	ACCTTCCATCAATCATTCACTTTCTTCA
48390	CTT (SEQ ID NO: 7)	GAGTGGT (SEQ ID NO: 8)
	ACGITGGATGTTCAATATGATGTGCCTG	IACG HGGA IG IGACC I I ICTAAAA I CAAAI
	TAAACC (SEQ ID NO: 9)	CATTCA (SEQ ID NO: 10)
		ACGTTGGATGGCAAGTGCATGGACAATG
720131		
1	ACGTTGGATGGAGAATGCATAGTCTAT	ACGTTGGATGACCCTAGACACTCCTTAC
720132	CTG ( <u>SEQ ID NO: 13</u> )	TC (SEQ ID NO: 14) ACGTTGGATGAGCATGTGTCAACTAAGA
I		
		GG (SEQ ID NO: 16)
105083		ACGTTGGATGTACTTACAGGCATCACAG
8	GCC (SEQ ID NO: 17)	V
106354	1	ACGTTGGATGGCATCTTCATCCTCTTCC
7	\\	
134879		ACGTTGGATGGTGTTCAGAAAGGCTTCT
5		GG (SEQ ID NO: 22)
134879		ACGTTGGATGCTCAGCTACAGAGGTAAT
6	GC (SEQ ID NO: 23)	AG (SEQ ID NO: 24)
134879		ACGTTGGATGCTTAAATTGGGTGTAAAT
8	GCC (SEQ ID NO: 25)	
	ACGTTGGATGTTGCCATGTGACACACC	
9	TGC (SEQ ID NO: 27)	TC (SEQ ID NO: 28)
135757	<u>ACGTTGGATGCCCTGAGAAGTTTAAGC</u>	ACGTTGGATGGCAAGGTAAGAGGATACA

dbSNP	Forward	Reverse
rs#	PCR primer	Reverse PCR primer  AG (SEQ ID NO: 30)  ACGTTGGATGACACCTGTCGACTAACTT
2	TTG (SEQ ID NO: 29)	AG (SEQ ID NO: 30)
137429	ACGTTGGATGTGTAAGATGCACGAGGA	ACGTTGGATGACACCTGTCGACTAACTT
5	CAG (SEQ ID NO: 31)	TC (SEQ ID NO: 32) ACGTTGGATGTGAGTATCAAGCTGTTTG
137429	ACGTTGGATGAATTCCACAGCCAGACA	ACGTTGGATGTGAGTATCAAGCTGTTTG
6	CAC ( <u>SEQ ID NO: 33</u> )	AC (SEQ ID NO: 34) ACGTTGGATGCAGTACAACTTTAAACAA
137429	ACGTTGGATGTTTTTGCACTTAACCTGG	ACGTTGGATGCAGTACAACTTTAAACAA
8	AG (SEQ ID NO: 35)	G (SEQ ID NO: 36) ACGTTGGATGGTTTTGGTTTAATTCCTG
9	ATG (SEQ ID NO: 37)	AG (SEQ ID NO: 38) ACGTTGGATGTGTGATGCCTCCAGCTTT
9	AAG (SEQ ID NO: 39)	AT (SEQ ID NO: 40) ACGTTGGATGTACTGAGCCTTGAAGGAT
8 407400	(SEQ ID NO: 41)	GC (SEQ ID NO: 42) ACGTTGGATGAAAAGGTAGGCCTCACTT
13/429	ACGITGGATGATACCIGTGGCGTACAC	ACGITGGATGAAAAGGTAGGCCTCACIT
224400	ACCTTCCATCCCACCCAAATCCATTCC	GC (SEQ ID NO: 44) ACGTTGGATGACTATCTACCCTGCCAGT
1224 190	ACG   IGGA I GGCAGGGAAA I GCA I I IGG	TC (SEO ID NO: 46)
22/108	ACCTTGGATGGGAAAGGGGATCTTAAA	TC (SEQ ID NO: 46) ACGTTGGATGAACTGGCAGGGTAGATA
224190	AGG (SEO ID NO: 47)	GTC (SEO ID NO: 48)
228003	ACGITGGATGCAAAGICCICTATGIGC	GTC (SEQ ID NO: 48) ACGTTGGATGAGTGTGTAGATAGCAT
8	AAG (SEQ ID NO: 49)	CC (SEQ ID NO: 50)
231738	ACGTTGGATGGCGGCGACTGATTGTGC	CC (SEQ ID NO: 50) ACGTTGGATGTCTCCTGATCCATGGGTT
3	TAC (SEQ ID NO: 51)	GC (SEQ ID NO: 52)
292173	ACGTTGGATGTTGGGATTACAGGTGTG	ACGTTGGATGCTGGGTAGTGAAATTGG
4	AGC (SEQ ID NO: 53)	GTG (SEQ ID NO: 54) ACGTTGGATGGACTATTCTGTAGTCTGT
292173	ACGTTGGATGGCAAGCTCACATGCGTG	ACGTTGGATGGACTATTCTGTAGTCTGT
5	TAG ( <u>SEQ ID NO: 55</u> )	GTG (SEQ ID NO: 56) ACGTTGGATGGCTCAGGGCAAGAAGA
292173	ACGTTGGATGGATGAGTAGAGTTGAGT	ACGTTGGATGGCTCAGGGCAAGAAGA
7	TCC (SEQ ID NO: 57)	ATC (SEQ ID NO: 58) ACGTTGGATGTTTAACCCCACATAGCAG
292173	ACGTTGGATGGTCAAGCTCAAGAGTGG	ACGTTGGATGTTTAACCCCACATAGCAG
8	AAG (SEQ ID NO: 59)	CC (SEQ ID NO: 60) ACGTTGGATGAAGTGAGCAACTGAGTCC
	ACGTTGGATGTCCCATCTCACAAAGCA	ACGIIGGAIGAAGIGAGCAACIGAGICC
	ACC (SEQ ID NO: 61)	TC (SEQ ID NO: 62)
		ACGTTGGATGTTTGCCAAAATCTCTTGT
5	TTC (SEQ ID NO: 63)	GC (SEQ ID NO: 64) ACGTTGGATGTAGACACAAAGTCCTTGC
292174	GGC (SEQ ID NO: 65)	
202175		ACGTTGGATGTCGCTGAATCCCATGAAG
0		AC (SEQ ID NO: 68)
292175		ACGTTGGATGCTCAGAGTGGTAGGAAAT
5	AAAC (SEQ ID NO: 69)	
292177		ACGTTGGATGACTTTGCATTGCTAACTTT
1	AGC (SEQ ID NO: 71)	C (SEQ ID NO: 72)
292178		ACGTTGGATGGATCACTTGGTGGATCTT
2	AAAC (SEQ ID NO: 73)	1
292178		ACGTTGGATGTATCTTTGAAGGGTTCCT
4	CACA (SEQ ID NO: 75)	CG (SEQ ID NO: 76)
292178	ACGTTGGATGAACTGGAGTCTGCCAAC	ACGTTGGATGCAGTAGAAACTGTTTAAG
5	CAC (SEQ ID NO: 77)	GC (SEQ ID NO: 78)
292178	ACGTTGGATGGGAGAAGGAAATGATGG	ACGTTGGATGCTGTTTATGCTGGAATAA

dbSNP	Forward	Reverse
rs#	PCR primer	PCR primer
7	TGG (SEQ ID NO: 79)	CC (SEQ ID NO: 80) ACGTTGGATGCTACTAAAGCTTCTGTAA
292179	ACGTTGGATGTTTGCTGCCGTGAGACA	ACGTTGGATGCTACTAAAGCTTCTGTAA
0	TTC (SEQ ID NO: 81)	GG (SEQ ID NO: 82) ACGTTGGATGCTATGACAGATGACTGTG
302011	ACGTTGGATGTTCTGTTTTTTTGGCCTG	ACGTTGGATGCTATGACAGATGACTGTG
1	TC (SEQ ID NO: 83)	AC (SEQ ID NO: 84) ACGTTGGATGGTGCTATAATCCAGCCTG
302011	ACGTTGGATGATTGTTTTTTAAGAGGCG	ACGTTGGATGGTGCTATAATCCAGCCTG
	GG (SEQ ID NO: 85)	TG (SEQ ID NO: 86)
ဩ02012		ACGTTGGATGCTTATCCCAGTAAGCATA
5	ATC (SEQ ID NO: 87)	CC (SEQ ID NO: 88)
		ACGTTGGATGTCTCTGAATCTAATGTTC
0	TGG (SEQ ID NO: 89)	CC (SEQ ID NO: 90)
ც02013		ACGTTGGATGAAGCGACTTGAGCATTCG
1	CCC (SEQ ID NO: 91)	TG (SEQ ID NO: 92)
302013		ACGTTGGATGTGAGGCCTACCTTTTTGT
200040	CG (SEQ ID NO: 93)	AC (SEQ ID NO: 94)
302013		ACGTTGGATGTGGGCAAAGGACTTGCAT
000040	TG (SEQ ID NO: 95)	AG (SEQ ID NO: 96) ACGTTGGATGGATTTGTGAT
302013	1	
202044	CTG (SEQ ID NO: 97) ACGTTGGATGGTGTAGGAAATGGGATT	GG (SEQ ID NO: 98) ACGTTGGATGTATCAAGCCTCGGGTATT
202015	ACAG (SEQ ID NO: 99)	CC (SEQ ID NO: 100) ACGTTGGATGCAGGTACTCAATAGATGT
302015	ACCITICATE CATALOTA CIACTA	GG (SEQ ID NO: 102) ACGTTGGATGACAGAAAGCATTTAACAG
302016	ACGTTGGATGACCTAAAAGACCTGCCA	GG (SEQ ID NO: 104) ACGTTGGATGCCTCATGAATTACCTTCT
302016	ACGITGGATGTGCCTCTTCTCCTCCAAA	TC (SEQ ID NO: 106) ACGTTGGATGAGGAACCTGTGCAACTGT
302016	ACGTTGGATGAACCAAAAGATTCTCTGC	AG (SEQ ID NO: 108) ACGTTGGATGATCCCCCAAGCTTGTTAC
3	TG (SEQ ID NO: 109)	AG (SEQ ID NO: 110)
302016	ACGTTGGATGGTGATTGGTTCAGGTAT	ACGTTGGATGAAACTTGCCCCAGAATCC
4	GGG (SEQ ID NO: 111)	AC (SEQ ID NO: 112)
302016	ACGTTGGATGGACCTATACAGGGCACT	ACGTTGGATGCTCACTACTCACACACTG
7	TAC (SEQ ID NO: 113)	
302016		ACGTTGGATGACCTGATTTTGAGTCAGT
8	GAG (SEQ ID NO: 115)	GC (SEQ ID NO: 116)
302016	ACGTTGGATGGAGGAACAGTCAATGAA	ACGTTGGATGAGCATGTGTCAACTAAGA
9	GGC (SEQ ID NO: 117)	GG (SEQ ID NO: 118)
302018	ACGTTGGATGTTGGCCCTTGCGTCATT	ACGTTGGATGCCAACCACCATTCAGAAG
1		AG (SEQ ID NO: 120)
_		ACGTTGGATGAATGTTGGGACTCCTCGC
2	TG (SEQ ID NO: 121)	AG (SEQ ID NO: 122)

Please amend Table 11 on pages 69-70 as follows:

TABLE 11

dbSNP	Extend	SEQ ID	Term
rs#	Primer	NO.	Mix
48390	AGGCACATCATATTGAAT	123	ACT
63184	AAACCAAGGAGTTTTCCC	124	ACG
720131	GAGCTAACTTGGCCTCC	125	ACT
	TATCCTAATTTCCTTGAGCA	<u>126</u>	
720132	C .		ACT
1020405	CCATTCAATTTGTAAAATTTC G	<u>127</u>	CGT
1050838	GGAGTTAAGCGAAAAGC	<u>128</u>	ACG
1063547	CCAGAAAAAGAGAAGGA	<u>129</u>	ACT
1348795	CCCTCCAGACACCTCCAC	<u>130</u>	ACT
1348796	AACTAAGAAGCAATAAGGAG AA	<u>131</u>	ACG
	CAAAATTCTATAGACTCGCA	<u>132</u>	
1348798	С	400	CGT
1348799	CCCCTTTGCCTTCCACC	<u>133</u>	CGT
1357572	TTCCCCCAAGAAATCAACCC	<u>134</u>	ACT
1374295	CGAGGACAGAGACTGTA	<u>135</u>	CGT
1374296	AGACACACTGCCCCCC	<u>136</u>	CGT
1374298	CTGGAGATTTTCCATGTTAG	<u>137</u>	ACT
1466029	GAAGGCCATGTGAGTATT	<u>138</u>	ACG
1838839	GACCAAGAATAGCCAAAG	<u>139</u>	ACG
2053728	CTTGCCACTCTCCTTTC	<u>140</u>	ACT
1374297	CTGTGGCGTACACATGAAAC TG	141	ACT
2241981	GCCTCCTGTCTTTCCAGAG	142	ACT
2241982	ACAAGTCCTACCCTCAG	143	ACG
2289938	TTTGGCTGAAAGTATGCTTC TATA	<u>144</u>	ACG
2317383	CGCCTGGGAAACCATGCTT	<u>145</u>	ACG
2921734	GTGTGAGCCACTGTGCC	<u>146</u>	ACG
2921735	ACCCCCAAAATGTTTA	<u>147</u>	ACG
2921737	AGTTGAGTTCCTTATAAAGA AA		ACG
2921738	ACTTATTGGCCTCTTAAAAC	<u>149</u>	ACT
2921739	CCTCAGTGAATTAAAACTCA TCA	<u>150</u>	ACT
2921745	TCAGAGTGTTTCTGATTTAA A	<u>151</u>	ACG
2921748	GAAAACCTAGGCAATACCA	<u>152</u>	ACG
2921750	CAGTTCACTCGTTGATTTA	<u>153</u>	CGT
2921755	AGGAGAAACAGGAAAGTAC AG	<u>154</u>	ACT
2921771	AGAGGATGAATAGGCCC	<u>155</u>	ACT

dbSNP.	Extend	SEQ ID	Term
rs#	Primer	<u>NO.</u>	Mix
	AAGCTTCTAGAATACTATCT	156	
2921782	GT		ACT
	TTTTCTAAATCTACATGCTTT	<u>157</u>	
2921784	GTT		CGT
2921785	CCACACCACCATCTAAG	<u>158</u>	CGT
2921787	GGTGGAATATTAGGTATGTG	<u>159</u>	ACT
2921790	CATTCAAGACTCTCAGAG	<u>160</u>	CGT
3020111	TTGGCCTGTCTACTGAT	<u>161</u>	ACT
3020117	TCTCTGCTGTGTTATCCA	<u>162</u>	ACT
3020125	CATACCAGTTTGCACTGC	<u>163</u>	ACG
	AAGCCTGGTTTTTTTTCTTTT	<u>164</u>	
3020130	G		CGT
3020131	AAGGGGAATTGGTTCCAG	<u>165</u>	ACT
0000400	TTTATGTCCCGAGTTAAAAT	<u>166</u>	AOT
3020132	AT	467	ACT
3020138	TTTCATGTGCTTATTGGCC	<u>167</u>	ACT
3020139	TCCTCATAAACCATCTTTTT	<u>168</u>	ACT
2020444	ATGGGATTACAGAAAATTGA	<u>169</u>	<b>АСТ</b>
3020141	TOTOGTAACCACTACAC	170	ACT
3020152	TGTCCTAACCACTACAC TAGAATTCAAAACAAGTGGT	170 171	ACT
3020156	AA	171	ACT
3020130	CAAAATGATAACACATCAAT	172	701
3020160	GTA	112	CGT
3020161	TCCAAATGATCTCAACACCT	<u>173</u>	ACG
3020163	TCTCTGCTGAAGTTGCT	174	ACT
	GATCCAATTCTGGCCAATTA	175	,
3020164	AAT		ACT
3020167	GCGGCAGGACTGGAACG	<u>176</u>	ACG
	AGGGAAAAGAAGACAAATTA	<u>177</u>	
3020168	AGAC		ACG
0000100	AAAAAAAAAACACAAAAACAC	<u>178</u>	
3020169	TG	470	ACT
3020181	CAAATTTTTGTTGAATGCC	<u>179</u>	ACG
3816342	CTCTCCCTATATGCAATCA	<u>180</u>	ACG

## Please amend Table 13 on page 74 as follows:

**TABLE 13** 

		SEQ ID
Primer Name	Primer Sequence	<u>NO.</u>
RAD21F13	CTTGGGGTGCTGTTTTCT	<u>181</u>
RAD21R13	ATTGCCACAGGGAGTGAT	<u>182</u>
RAD21F12	CTCTCCCTCCAGAAAAAATA	<u>183</u>
RAD21R12	CTCAGCAGCATTAAGTACAGT	<u>184</u>
<i>RAD21</i> F11	GAGTTACAGCGAAGCATAA	<u>185</u>
<i>RAD21</i> R11	TCCTTGTGGGGAAGTATAG	<u>186</u>
RAD21F10	TGGAGCACTCTAAAGCAATAC	<u>187</u>
RAD21R10	ATCCCCTTTCCCCTTTAC	<u>188</u>
RAD21F9	AAGACAGGAGGCTTCATACT	<u>189</u>
RAD21R9	CCTTTGGAAGATAGAAATCAG T	<u>190</u>
RAD21F8	AAAGAAAATGTGCCATACAG	<u>191</u>
RAD21R8	TGCGTCATTTTGCTTATTT	<u>192</u>
RAD21F7	AAAAAAGCAAGAAGCCTAGT	<u>193</u>
RAD21R7	TTTCTCCTCCCCATTTGT	<u>194</u>
RAD21F6	TACAATCATCCCCAGAATC	<u>195</u>
RAD21R6	CTGGAGGAGAAACAGATAAA	<u>196</u>
RAD21F5	CCGAAATGTCCTATTGAAC	<u>197</u>
RAD21R5	TGCCCCAGTGTTGTAACT	<u>198</u>
RAD21F4	ACTCCTCGCAGAAATCAA	<u>199</u>
RAD21R4	CTTGGATTGTACTGGAATGTG	<u>200</u>
RAD21F3	ACAAGCGTATCTGTTTCAGT	<u>201</u>
RAD21R3	TACCTACTTATCTCCCTCTGAT	<u>202</u>
RAD21F2	TGAAGGGTTCCTCGTATT	<u>203</u>
RAD21R2	ATTTCCAGTCACTCTGTCTT	<u>204</u>
RAD21F1	CTGATGCTTATTTGCCATTA	<u>205</u>
RAD21R1	TTCCCCTCTTAGGTTTTCTT	<u>206</u>
RAD21PRO F1	CTTTCTATCGCTTTGAATACA	<u>207</u>
RAD21PRO R1	ACACAGAACCCTTTGAGAA	<u>208</u>

Please amend Table 15 on page 75 as follows:

**TABLE 15** 

dbSNP rs#	Forward PCR primer	Reverse PCR primer
	ACGTTGGATGACCTCTTCCTCTTCA	ACGTTGGATGACCAGAGTTAGAACTT
rs1050838	TCATC (SEQ ID NO: 209)	CTGC (SEQ ID NO: 210)
rs1050838a	ACGTTGGATGTACTTACAGGCATCA	ACGTTGGATGAGATGAGTCAGCTATG
dj	CAGGC (SEQ ID NO: 211)	CCTC (SEQ ID NO: 212)
		ACGTTGGATGTACTTACAGGCATCACA
rs1063547	GCCTC (SEQ ID NO: 213)	GGC (SEQ ID NO: 214)
		ACGTTGGATGCCTACTTCTCTCCCTAT
rs3816342	TTGGG (SEQ ID NO: 215)	ATG (SEQ ID NO: 216)
		ACGTTGGATGACACATGGGCTTTGGT
rs1804043	AGGGC (SEQ ID NO: 217)	TAGC (SEQ ID NO: 218)
RAD_1101		ACGTTGGATGGAGTCATTTTAAAAAAT
2	ATGTT (SEQ ID NO: 219)	TCAG (SEQ ID NO: 220)
RAD_1995	)	ACGTTGGATGCATATCAAGTCTATCTA
[1	AAATC (SEQ ID NO: 221)	GAGG (SEQ ID NO: 222)

Please amend Table 16 on page 76 as follows:

**TABLE 16** 

dbSNP rs#	Extend Primer	SEQ ID <u>NO.</u>	Term Mix
105000	CTTCTGCCAGAAAAAGAGAAG	222	
rs1050838	GA	<u>223</u>	ACG
	CTCAGGGAGTTAAGCGAAAA		
rs1050838adj	G	<u>224</u>	ACG
	ACAGGCTCTGGGTCAATTTG		
rs1063547	TCC	<u>225</u>	ACT
rs3816342	TCTCTCCCTATATGCAATCA	226	ACG
	GCTTTGGTTAGCTTCTTATC	227	
rs1804043	C		ACC
RAD_11012	ATTCAGATGCTAAAGAATT	<u>228</u>	CGT
RAD_19951	TAGAGGTGATAAGGACTTCA	229	ACG

Please amend paragraph 237 on page 78 as follows:

[0237] A cumulative mRNA expression profile was determined for *RAD21* using a panel of 56 cells and tissues that represent a plurality of cells from different human tissue types. Specifically, RT-PCR was performed in cDNA made from 56 cell lines and 11 normal tissue samples using the following primers: forward, which spanned exons 8 and 9-CAATGCCAACCATGACTGAT (SEQ ID NO: 230) and CGGTGTAAGACAGCGTGTAAA (SEQ ID NO: 231). The cDNA samples represent a variety of tissue types throughout the human body. The PCR reactions were done in a final volume of 10 μl using Hotstar Taq<sup>TM</sup> from Qiagen, Inc. Half of the PCR reaction was loaded on a 2% agarose gel to resolve the resulting product. From the expression profiling described above, RAD21 expression was found to be high and ubiquitous (see Figure 5).

Please amend Table 23 on page 79 as follows:

**TABLE 23** 

siRNA	siRNA Target	Sequence Specificity	SEQ ID NO.
siRAD21_272	RAD21	AAGCCCAUGUGUUCGAGUGUA	<u>232</u>
si <i>RAD21</i> _1175	RAD21	AAGAGUUGGAUAGCAAGACAA	233
si <i>RAD21</i> _1175 S	Non-homologous scrambled control	AAGACAGAUACGAUGAUGAGA	<u>234</u>